

ARG81425 Human VEGFR2 ELISA Kit

Package: 96 wells
Store at: 4°C

Component

Cat. No.	Component Name	Package	Temp
ARG81425-001	Antibody-coated microplate	8 X 12 strips	4°C. Unused strips should be sealed tightly in the air-tight pouch.
ARG81425-002	Standard	2 X 10 ng/vial	4°C
ARG81425-003	Standard/Sample diluent	30 ml (Ready to use)	4°C
ARG81425-004	Antibody conjugate concentrate (100X)	1 vial (100 µl)	4°C
ARG81425-005	Antibody diluent buffer	12 ml (Ready to use)	4°C
ARG81425-006	HRP-Streptavidin concentrate (100X)	1 vial (100 µl)	4°C
ARG81425-007	HRP-Streptavidin diluent buffer	12 ml (Ready to use)	4°C
ARG81425-008	25X Wash buffer	20 ml	4°C
ARG81425-009	TMB substrate	10 ml (Ready to use)	4°C (Protect from light)
ARG81425-010	STOP solution	10 ml (Ready to use)	4°C
ARG81425-011	Plate sealer	4 strips	Room temperature

Summary

Product Description	ARG81425 Human VEGFR2 ELISA Kit is an Enzyme Immunoassay kit for the quantification of Human VEGFR2 in serum, plasma (heparin, EDTA) and cell culture supernatants.
Tested Reactivity	Hu
Tested Application	ELISA
Specificity	There is no detectable cross-reactivity with other relevant proteins.
Target Name	VEGFR2
Conjugation	HRP
Conjugation Note	Substrate: TMB and read at 450 nm.
Sensitivity	31.25 pg/ml
Sample Type	Serum, plasma (heparin, EDTA) and cell culture supernatants.
Standard Range	62.5 - 4000 pg/ml
Sample Volume	100 µl

Precision	Intra-Assay CV: 6.8% Inter-Assay CV: 7.7%
Alternate Names	FLK1; VEGFR; CD antigen CD309; FLK-1; Fetal liver kinase 1; VEGFR2; Vascular endothelial growth factor receptor 2; VEGFR-2; CD309; Kinase insert domain receptor; EC 2.7.10.1; Protein-tyrosine kinase receptor flk-1; KDR

Application Instructions

Assay Time	~ 5 hours
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Properties

Form	96 well
Storage instruction	Store the kit at 2-8°C. Keep microplate wells sealed in a dry bag with desiccants. Do not expose test reagents to heat, sun or strong light during storage and usage. Please refer to the product user manual for detail temperatures of the components.
Note	For laboratory research only, not for drug, diagnostic or other use.

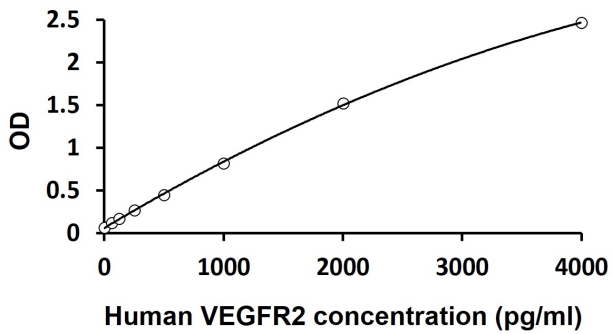
Bioinformation

Gene Symbol	KDR
Gene Full Name	kinase insert domain receptor
Background	Vascular endothelial growth factor (VEGF) is a major growth factor for endothelial cells. This gene encodes one of the two receptors of the VEGF. This receptor, known as kinase insert domain receptor, is a type III receptor tyrosine kinase. It functions as the main mediator of VEGF-induced endothelial proliferation, survival, migration, tubular morphogenesis and sprouting. The signalling and trafficking of this receptor are regulated by multiple factors, including Rab GTPase, P2Y purine nucleotide receptor, integrin alphaVbeta3, T-cell protein tyrosine phosphatase, etc.. Mutations of this gene are implicated in infantile capillary hemangiomas. [provided by RefSeq, May 2009]
Function	Tyrosine-protein kinase that acts as a cell-surface receptor for VEGFA, VEGFC and VEGFD. Plays an essential role in the regulation of angiogenesis, vascular development, vascular permeability, and embryonic hematopoiesis. Promotes proliferation, survival, migration and differentiation of endothelial cells. Promotes reorganization of the actin cytoskeleton. Isoforms lacking a transmembrane domain, such as isoform 2 and isoform 3, may function as decoy receptors for VEGFA, VEGFC and/or VEGFD. Isoform 2 plays an important role as negative regulator of VEGFA- and VEGFC-mediated lymphangiogenesis by limiting the amount of free VEGFA and/or VEGFC and preventing their binding to FLT4. Modulates FLT1 and FLT4 signaling by forming heterodimers. Binding of vascular growth factors to isoform 1 leads to the activation of several signaling cascades. Activation of PLCG1 leads to the production of the cellular signaling molecules diacylglycerol and inositol 1,4,5-trisphosphate and the activation of protein kinase C. Mediates activation of MAPK1/ERK2, MAPK3/ERK1 and the MAP kinase signaling pathway, as well as of the AKT1 signaling pathway. Mediates phosphorylation of PIK3R1, the regulatory subunit of phosphatidylinositol 3-kinase, reorganization of the actin cytoskeleton and activation of PTK2/FAK1. Required for VEGFA-mediated induction of NOS2 and NOS3, leading to the production of the signaling molecule nitric oxide (NO) by endothelial cells. Phosphorylates PLCG1. Promotes phosphorylation of FYN, NCK1, NOS3, PIK3R1, PTK2/FAK1 and SRC. [UniProt]
Highlight	Related products: VEGFR antibodies ; VEGFR ELISA Kits ; New ELISA data calculation tool: Simplify the ELISA analysis by GainData
PTM	N-glycosylated. Ubiquitinated. Tyrosine phosphorylation of the receptor promotes its poly-ubiquitination, leading to its degradation via the proteasome or lysosomal proteases. Autophosphorylated on tyrosine residues upon ligand binding. Autophosphorylation occurs in trans, i.e.

one subunit of the dimeric receptor phosphorylates tyrosine residues on the other subunit. Phosphorylation at Tyr-951 is important for interaction with SH2D2A/TSAD and VEGFA-mediated reorganization of the actin cytoskeleton. Phosphorylation at Tyr-1175 is important for interaction with PLCG1 and SHB. Phosphorylation at Tyr-1214 is important for interaction with NCK1 and FYN. Dephosphorylated by PTPRB. Dephosphorylated by PTPRJ at Tyr-951, Tyr-996, Tyr-1054, Tyr-1059, Tyr-1175 and Tyr-1214.

The inhibitory disulfide bond between Cys-1024 and Cys-1045 may serve as a specific molecular switch for H(2)S-induced modification that regulates VEGFR2 function. [UniProt]

Images



ARG81425 Human VEGFR2 ELISA Kit standard curve image

ARG81425 Human VEGFR2 ELISA Kit results of a typical standard run with optical density reading at 450 nm.